UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R051XA004NM

Site Name: Gravelly Loam

Precipitation or Climate Zone: 9 to 13 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on benches, ridges, and the gentle side slopes adjoining these features. It is often found associated with the coarse loamy site. Slopes vary from 1 to 15 percent, but are generally less than 10 percent. Elevations range from 7,400 to 7,800 feet above sea level

Land Form:

1. Ridges
2. Hillside
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	7,400	7,800
Slope (percent)	1	15
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Mean annual precipitation varies from 9 to 13 inches. Departures from the average of 4 inches or more are common. Approximately 50 percent of this moisture occurs during the vegetative growth period, April through September. Over 20 percent of the precipitation comes in the form of high intensity summer thunderstorms, which influences the presence and production of warm-season plants. Winter and early spring moisture in the form of rain or snow influences the presence and production of cool-season plants. This moisture also influences maximum shrub growth.

Mean annual temperature varies from 64 degrees F in July to 21 degrees in January. The average last killing frost in the spring is May 30th, and the first killing frost in the fall is September 30th. The frost-free period is approximately 120 days, but freezing temperatures have been recorded every month except July and August.

Wind velocities are relatively light most of the year with stronger winds occurring in the spring and early summer. These winds increase transpiration rates of plants and rapidly dry the surface soil.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	68	130
Freeze-free period (days):	95	154
Mean annual precipitation (inches):	9	13

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.62	1.06	4.0	39.7
February	.57	1.14	7.9	45.3
March	.76	1.80	14.5	52.7
April	.82	1.75	21.8	62.6
May	.89	1.79	28.7	71.9
June	.90	1.29	32.9	81.9
July	1.67	2.90	40.8	85.4
August	1.85	3.18	40.2	83.2
September	1.26	1.60	33.6	76.4
October	1.06	1.53	25.0	65.7
November	.67	1.34	13.9	52.0
December	.64	1.15	6.0	41.6

Climate Stations:

				Period		
Station ID	291630	Location	Cerro, NM	From: 02/01/32	To:	12/31/00
Station ID	297323	Location	Red River, NM	From: 01/01/15	To:	12/31/00
Station ID	298668	Location	Taos, NM	From: 01/01/14	To:	12/31/00
Station ID	299085	Location	Tres Piedras, NM	From: 01/01/14	To:	12/31/00

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:
N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

These gravelly soils are generally moderately deep. There are gravels throughout the profile. There is generally a high lime content, but no strong lime zone near the surface. They are rapidly drained and have a low water-holding capacity. These soils can often utilize most of the high intensity summer rainfall, but much of the winter moisture will not be stored. This explains the lack of sagebrush on this site.

Parent Material Kind: Alluvium
Parent Material Origin: Mixed

Surface Texture:

1. Gravelly loam
2.
3.

Surface Texture Modifier:

1. Gravel
2.
3.

Subsurface Texture Group: Loamy
Surface Fragments <=3" (% Cover): 15 to 35
Surface Fragments >3" (% Cover): N.A

Subsurface Fragments <=3" (%Volume): 15 to 35
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	Maximum
Drainage Class:	Well	Rapidly
Permeability Class:	Moderately slow	Moderate
Depth (inches):	60	>72
Electrical Conductivity (mmhos/cm):	0.00	4.00
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	6.6	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	3	6
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
Cool-season grasses characterize this grassland site and scattered shrubs but noticeably lacking in significant amounts of big sagebrush due to low effective winter moisture.

Canopy Cover:	
Trees, shrubs and half-shrubs	10 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	23
Bare ground	32
Surface gravel	30
Surface cobble and stone	5
Litter (percent)	10
Litter (average depth in cm.)	2

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	171	347	522
Forb	23	46	70
Tree/Shrub/Vine	71	145	218
Lichen			
Moss			
Microbiotic Crusts			
Total	285	578	870

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	PASM	Western Wheatgrass	116 – 173	116 – 173
2	ACHY	Indian Ricegrass	58 – 87	58 – 87
3	HECO26	Needleandthread	58 – 87	58 – 87
4	BOCU	Sideoats Grama	52 – 69	52 – 69
5	ELEL5 BOGR2 SPCR	Bottlebrush Squirreltail Blue Grama Sand Dropseed	35 – 46	35 – 46
6	2GRAM	Other Grasses	T – 29	T - 29

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
7	ASTER ASTRA ERIOG CACO17	Aster spp. Astragalus spp. Buckwheat spp. Indian Paintbrush	12 – 29	12 – 29
8	SPCO	Scarlet Globemallow	6 – 17	6 – 17
9	2FA	Other Annual Forbs	T – 6	T – 6
10	2FP	Other Perennial Forbs	6 – 17	6 - 17

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ERICA	Rabbitbrush spp. (Green)	75 – 104	75 – 104
12	ATCA2	Fourwing Saltbush	17 – 35	17 – 35
13	ARTR2	Mountain Big Sagebrush	6 – 17	6 – 17
14	HYRI GUSA2	Pingue Broom Snakeweed	12 – 23	12 – 23
15	2SD	Other Shrubs	12 – 29	12 - 29

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species include: prairie junegrass, threeawn spp. and muhly spp.

Plant Growth Curves

Growth Curve ID **3503NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Cool-season grassland with scattered shrubs.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This ecological site provides habitats which support a resident animal community that is characterized by pronghorn antelope, badger, white-tailed jackrabbit, Ord's kangaroo rat, deer mouse, prairie lark, and prairie rattlesnake.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	**Hydrologic Group**
Unknown	

Recreational Uses:

This site has little recreational value. It has limited value for picnicking, camping or hunting. It has relatively poor value for aesthetic appeal and natural beauty.

Wood Products:

This site produces no significant wood products in it potential plant community.

Other Products:

Grazing:

Approximately 90 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing distribution generally is not a problem if adequate waterings are provided. Continuous grazing, which allows repetitive grazing of the desirable species, eventually leads to a decrease in these species from the plant community. Such deterioration is indicated by a decrease in western wheatgrass, Indian ricegrass, needleandthread, sideoats grama, and fourwing saltbush. Species that increase include blue grama, dropseeds, annual forbs, rabbitbrush, and broom snakeweed. A planned grazing system with periodic deferments is best to maintain the desirable balance between plant species and to maintain high productivity.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	3.5 – 4.6
75 – 51	4.5 – 6.9
50 – 26	6.7 – 13.8
25 – 0	13.8+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Indian Ricegrass	Achnatherum hymenoides	EP	P	P	P	P	P	P	P	P	P	P	P	P
Needleandthread	Hesperostipa comata	EP	D	D	P	P	P	D	D	D	D	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Taos**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the High Intermountain Valleys 51 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Taos

Characteristic Soils Are:	

Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	5/15/84	Don Sylvester	5/15/84

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	07/10/02	George Chavez	2/12/03